

# **MISCUE ANALYSIS Made Easy**

**Building  
on Student  
Strengths**

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A final word of acknowledgment. In writing this book, I went back to my notes from the miscue analysis class I took from the late Peter Board at the Ontario Institute for Studies in Education. He was a wonderful teacher who shared not only the procedures of miscue analysis but an enthusiasm for how much fun it was to really look closely at readers. Although I'd seen him only occasionally since 1977, I fondly remembered him as one of my best teachers. I was also struck by the brilliance of his 1982 dissertation, which is described briefly in this book. I was shocked when I'd heard in 1991 that he'd died of AIDS. The world lost not only an important scholar but a kind, lively, and courageous human being. He is very much missed. I dedicate this book to his memory.

# 1

## Honoring What Readers Do

I'd like to welcome you to a dramatically different world of reading, one where we honor and celebrate what readers do in their drive to make sense of print, where error isn't necessarily bad and is indeed often a sign of strength. This is a world where teachers can focus not on labeling and categorizing readers but on listening to and understanding them, where our role is not to process them through a program but to help them move forward based on what we know about them right now.

As I take you through a step-by-step process of developing your own understanding of how reading works and learning a procedure called miscue analysis, I hope that this book will help you look at all readers, from yourself to your most troubled student, with a new appreciation of the power and complexity of how we construct meaning from written language.

I'll begin with an anecdote. "What's your first impression of what that headline says?" asked a colleague. "Meditation aids in divorce," I replied. We both laughed as I realized that the line actually referred to *mediation*. This exchange reflected our understanding of miscue analysis, a powerful procedure for understanding the reading process and the strategies of individual readers. Invented by Kenneth Goodman (1976) and developed in forms suitable for teachers as well as researchers by Yetta Goodman, Dorothy Watson, and Carolyn Burke (1987), it was refined and explored by many others (see Brown, Goodman, & Marek, 1996, for a comprehensive bibliography). Miscue analysis is, I believe, the best single tool that teachers can use to understand readers and support their further learning.

*My meditation/mediation* example, and our amused reaction to it, can illuminate our understanding of what miscues are all about. Why do we call them miscues rather than errors? For two reasons: First,

although the dictionary defines *miscue* as a mistake or slip, it has more neutral connotations than those two synonyms. The teaching of reading in particular has a long history of assuming that mistakes and errors should be avoided, but a central idea of miscue analysis is that miscues vary in quality; some are actually signs of a strong reader. Second, the term *miscue* recognizes that readers are using the multiple cueing systems of written language as they read.

We can see the appropriateness of the terminology as we think about why I read *meditation* for *mediation*. Headlines are meant to be read quickly; we may merely glance at them when we pick up the newspaper. They are often full sentences, although not always, but don't end with periods. They may be entirely in uppercase letters, have most words capitalized as titles do, or have only the first word capitalized. Context is minimal. It's therefore very easy to make miscues on headlines. (As I was writing this book, I came across a headline that intentionally encouraged a miscue; taking advantage of their own convention of capitalizing headlines like titles, the *New York Times* [September 3, 1999] had a page one story [with photo] datelined Chappaqua, NY and headlined, "With Help, Clintons Purchase a White House."

Going back to my miscue, in this case, *meditation* was a very predictable miscue for three reasons. First, and most obviously, it makes sense. Who wouldn't benefit from meditation during a stressful time like divorce? Also, at the time of this headline, in the early 1980s, divorce mediation was a relatively new procedure (thus the news article), and the term was therefore less familiar in this context. It's also obvious that the two words are almost identical in their spellings. With a close look, the reader who knows both words can tell which one it is (as I indeed did when I looked back at the headline), but I imagine that if the headline were flashed quickly on a screen many readers would make the same miscue. The third cause of this miscue's relative predictability was the syntax of the headline. If it had referred to "divorce mediation," it might have held together as a phrase, but *mediation*, unmodified, was the first word.

This example, taken from a good reader, shows how it is that little "glitches" can happen frequently in the reading process, to all readers. We're especially aware of this when we read aloud. To err is human. We can try to read as word-perfectly as possible, but the tradeoff is a loss of efficiency (we have to go slower) and often a loss of comprehension as we shift our attention from meaning to word identification. What's interesting is not that we make miscues but rather what miscues we make. When multiple readers make the same miscue on a particular text, that tells us something about how typical readers respond to

various kinds of text features. In a classic example from Ken and Yetta Goodman's research, many Americans read *headlights* for *headlamps* in a story by a British author (Goodman, Waston, & Burke, 1987).

Miscue analysis has been tremendously valuable for researchers working to understand the reading process. However, its most important use for teachers is to understand how individual readers, particularly those who are less successful, construct meaning from text. Let's look at an example from a somewhat weak reader to see what it can tell us. I'd invited Sarah, age seventeen, to read the classic O. Henry story "The Gift of the Magi." Written in 1906, the story has a good deal of archaic vocabulary (e.g., "imputation of parsimony") that she struggled with valiantly. She read the word *Magi* as *Maggie* each of the four times that it occurred, including in the title and in the following two passages that began and ended the last paragraph of the story:

The magi, as you know, were wise men—wonderfully wise men—who brought gifts to the Babe in the manger. . . .

O all who give and receive gifts, such as [the two characters in this story] are wisest. Everywhere they are wisest. They are the magi.

Clearly, *Magi* was an unfamiliar word for Sarah, and clearly she used phonics to come up with a pronunciation for it. When we discussed the story after she'd read it, she admitted that she didn't know what the "Maggie" were, but when I steered her back to reading the sentence that defines them as the wise men, it turned out that she was familiar with the three wise men of the New Testament. (She's a churchgoer.) She had never, however, heard the term *Magi*.

What does this miscue tell us about Sarah as a reader? My comments are in the context of her entire reading of the story. When she came to an unfamiliar word, she made a stab at it that relied primarily on phonics, sometimes producing a real word and sometimes not. For instance, her first reading of *imputation of parsimony* was "imputation of parmished-me." She then tended to keep going as quickly as possible. A bad strategy? Not necessarily. She might have been able to come up with somewhat better pronunciations of the words, but she probably wouldn't have known the meanings even if she'd pronounced them right. Also, the sentence structure was typically complex enough that she couldn't have easily substituted other words that would make sense:

Pennies saved one and two at a time by bulldozing the grocer and the vegetable man and the butcher until one's cheeks burned with the silent imputation of parsimony that such close dealing implied.

What her quick guess-and-go strategy for hard words enabled Sarah to do was to keep moving through the story and get the gist of what was going on. We'll look at her reading of the story in more depth later, but what's revealing and useful about the "Maggie" miscue, viewed as part of a pattern, is that it reveals one way that this reader deals with difficult text: making a quick attempt at an unfamiliar word and then going on.

### Why should I learn miscue analysis?

The most important reason to learn miscue analysis is to better understand what readers are doing, which then helps inform instruction. More specifically, miscue analysis helps us understand what strategies struggling readers are using and how effective those strategies are, in a way that doesn't focus on weakness, doesn't oversimplify, and doesn't label readers. It's a supremely empirical process: After listening to a reader and discussing what she's read, the teacher records the miscues (as a way of preserving the reader's rendition of the text) and follows a series of simple procedures to create a profile of the reader. The most important part of the process is the thinking it provokes in the teacher about how a reader uses the multiple cueing systems of language to construct meaning. Although a miscue analysis produces some useful numerical data, the teacher's knowledge of what the numbers mean is what really matters.

Once you've learned miscue analysis, you'll be able to use it to track troubled readers over time, and you'll also find that you'll listen to readers in a new way. This is a good point to mention the different versions of miscue analysis. They can be found in great detail in *Reading Miscue Inventory* (Goodman, Watson, & Burke, 1987), the authoritative reference book on the topic. Procedures I and II are highly detailed versions of miscue analysis in which every miscue is analyzed across multiple dimensions. They're useful for advanced training, for research purposes, and to create a very complete profile of a reader. Procedure III, which you'll learn to carry out in this book, is extremely useful both for the regular classroom teacher and for Title I and special education settings. Also, a teacher must understand how to carry out Procedure III (or one of the more complex versions) in order to have an adequate understanding of the theory and practice of miscue analysis. Procedure IV, which I'll also mention briefly in this book, is an even simpler version that can be used by a teacher knowledgeable in one of the other procedures; it doesn't require tape-recording.

Also, although it's not a procedure as such, users of miscue analysis have for years talked about a "miscue ear"; once you've learned to

really understand how the reading process works and how readers transact with text, it informs your responses every time you hear someone read. It enables you, in a reading conference with a student, to notice a miscue, understand what it tells you, and have a "teachable moment" interaction on the spot. For instance, thirteen-year-old Darcy, encountering the place name Greenwiche (pronounced Grenitch), made four attempts on it, as follows:

1. Gr-
2. Gren-
3. Greenwiche
4. Grenwiche.

A knowledge of miscue analysis enables the listener to realize that she was, of course, relying primarily on phonics to pronounce this word, and that although her pronunciation wasn't "correct," it still worked in the context of the sentence and passage as a whole. This would provide an excellent opportunity to talk about how proper names can be challenging to pronounce, and that it usually doesn't matter if you get them quite right as long as you know it's (in this case) a place name. It would also have been interesting to see if she'd ever heard of Greenwiche and, if so, whether she realized that this was the same word.

A little about how this book is organized. The next three chapters are for background, focusing on the language systems we use when we read, as well as how reading works. The most important tool of miscue analysis is the teacher's brain, so these chapters are crucial for doing the procedure well. Then the bulk of the book will focus on the how-tos and the whys: not only how to conduct, code, and analyze a reader's miscues, but what we can learn about readers from each step of the process, as well as how miscue analysis fits into classroom life generally.

## 4

*Aren't Errors Bad?*

## Some Underlying Principles of Miscue Analysis

if they are random, about ten letters when the letters make up five words, and all twenty-five if they are arranged in a meaningful sentence. It's a seeming paradox that we can read a word more quickly than we can identify the individual letters that make it up. But this is, of course, no different than the way our minds work every day. We can recognize a friend across the street more easily than we can tell that she has a new haircut.

How does this work for reading? Think first about reading something very easy, such as a predictable children's book. You can read it very quickly, or in dim light, because even if you've never read it before, you sort of know what's coming. In a sense, you skim over the surface of the text, predicting what comes next.

This concept of prediction has been somewhat misunderstood; it doesn't mean readers just guess what comes next. We do attend to the print on the page; we just don't have to look as closely at it to read it as we would to read a list of random letters. Not only do we recognize most words we encounter, the meaning builds up as we go along so that we don't have to look closely at each word. But if we get stuck while reading, if something brings us up short, then we can stop or go back and attend to the particular word or passage where we encountered the problem. Sometimes we get stuck because we've hit a word we don't know. We might at that point use our graphophonic knowledge to try to pronounce it, but would almost certainly have a range of other strategies, such as using context, reading ahead to see if the author explains it, or skipping the word.

We can see how this worked for fifth-grade Miranda. When she came to the word *ptarmigan* in a book about the Arctic (Pandell, 1993), she read, "Pear, part-im-gan, whatever that is. I don't know what it is," and then continued with her reading. She tried "sounding out" (that is, using graphophonic information) twice, with no luck, and then decided to just keep going. (If you think kids shouldn't keep going until they've figured out a word, are you sure you never do this yourself?)

A strategy that Miranda didn't employ was to use the book's picture of a ptarmigan to help her figure out the word; her class had been studying the Arctic and she knew what a ptarmigan was. My strong hunch, confirmed by my later discussion of the book with Miranda, is that it didn't occur to her because the word on the page started with a *p*, not a *t*. What an opportunity this offers for a teachable moment, however. You could talk not only about using pictures to help you when you're stuck, but about words beginning with a silent *p*, like *pterodactyl* and *pneumonia*. (By the way, why do we have so few words beginning with a silent *p*? How do you think they got that way?)

It's really hard to get a handle on what we do when we read, because once we stop to examine the process, we're no longer engaged in it. This issue has been examined and researched from a variety of perspectives and with a number of methodologies. (For an excellent overview, see Smith, 1997; for a variety of views, see Ruddell, Ruddell, & Singer, 1994.) Many of the ideas in this chapter are based, in very simplified form, on the important theoretical work of Smith and of Kenneth Goodman (1982). What I'd like to provide here is a fairly simple discussion that will help us understand the role that miscues play for readers.

## Reading in real time

If you asked the average person on the street what we do when we read, the first answer might well be either that we translate letters into sounds or that we recognize words. However, fluent reading is a much more holistic process, particularly when you're in the middle of an absorbing book. Our focus is, of course, primarily on the content and meaning of what we're reading, just as when we listen we don't consciously analyze the speech sounds. (Although our brains are hardwired for spoken language in a way that they're not for literacy, the processes of reading, writing, speaking, and listening do have many similarities.)

If our focus is on meaning, where does the print on the page come in? A couple of research studies give us clues. Smith (1988; see also Huey, 1918/1968) describes how when twenty-five letters are flashed quickly on a screen, viewers typically remember only four or five letters



Another kind of sticking point in reading is when we're moving along okay but then something doesn't compute, so we go back and take another look at what we've already read. A simple example: Sarah, age seventeen, read the phrase "One flight up Della ran," substituting *rang*, and immediately corrected it because it didn't make sense in that context. As readers, we do this kind of regression and self-correction all the time, in both oral and silent reading. You may wonder if she wouldn't have been better off if she'd gotten the word right in the first place; let's turn now to that question.

### Why errors aren't bad

In some human endeavors, mistakes are disastrous. As the old joke goes, one wrong slip of the brain surgeon's scalpel, and there go the music lessons. Other activities are a little more forgiving of mistakes; although people still make bad decisions driving, it's less disastrous overall than in the days before seat belts, air bags, and crash-resistant bumpers. Other mistakes are only minor inconveniences at worst. You make a typo and the spellchecker catches it. You buy a cereal that wasn't the one your child asked for, so you eat it yourself or give it to a food pantry.

Why do we tolerate error at all? Although it's certainly true that mistakes are a natural outcome of being human, we could be far more vigilant than we usually are. (By the way, for an interesting fictional look at error, read David Carkeet's subtle novel *The Error of Our Ways*, 1997, whose theme is the role that error plays in determining our fate.) There are two reasons for accepting a certain level of error in any activity. First, it usually doesn't matter that much, is correctable, or both. Second, there's a trade-off between error and speed or efficiency.

Let's think about surgery, and typing. In surgery, it's so important to minimize mistakes that the surgeon is highly trained and a number of other experienced people assist, using practiced procedures and monitoring closely. I don't think anyone undergoing a surgical procedure would say, "Why don't you just do it any old way so I can get out of the O.R. sooner?" The fact that so many checks and balances are in place to reduce error is an indication of how normal it is to make mistakes; we have to make extraordinary efforts to eliminate them completely. Typing is pretty much at the other end of the continuum of danger, isn't it? The trick is to find the most efficient balance between speed and accuracy; perfect accuracy, if possible at all, would slow you way down. But typos are of course no big deal and can be quickly fixed. (Though we've all heard of major exceptions to this: when a contract can become a lot more expensive because a couple of zeroes are added,

or a space satellite malfunction because of a misplaced comma in the computer code, you'd better be sure to have some good checks and balances in place.)

So where does reading fall on this continuum? It depends to some extent on the reader, the material and why it's being read, and the miscue. It's a common belief that good readers make very few miscues (Gough, E-mail communication, 1996), but this is actually a trivial difference. Weaker readers may seem to make more miscues, but this is often because they're reading text that's too hard for them. Once readers are interacting with texts that they can handle independently and with a fair degree of fluency, the quality of miscues they make is far more important than how many.

Not all miscues are equal; some are better than others. Darcy, age twelve, produced the following reading, "On breaks we usually went out in the back room." From just hearing that, you wouldn't even know there had been a miscue. (She inserted *out*.) In principle one might say that it would be better not to have made the miscue, but in practice avoiding all miscues would slow the process down and, even more problematic, pull the reader's attention away from meaning. Correcting all miscues would have the same effect. In fact, readers sometimes overcorrect, when it would be more efficient to just keep going if the miscue doesn't disrupt the meaning.

In contrast, let's look at a miscue by Miranda. The sentence was "Musk-oxen form a protective circle around their young," but she replaced *form* with *from*, thereby eliminating the verb. One of her weaknesses as a reader was that she was too willing to continue even when what she read didn't sound like English sentences or make sense. Remember that trade-off: more speed, less accuracy; more accuracy, less speed. The trick is to find the balance, and to monitor the process through a focus on meaning.

### How much do we look at when we read?

Reading is both conceptual and visual. As we read, our brains are simultaneously constructing meaning and processing input from our retinas. I'd like to highlight a couple of points about this very complex process.

First, the psychologist Paul Kolers (1969) conducted a fascinating study of bilingual adults reading passages that alternated a few words of English with a few words of French. An example:

His horse, followed de deux bassets, faisait la terre résonner under its even tread. (12)

Being bilingual, the readers understood the passages, but often couldn't remember which language particular words had been in, and would make miscues where they substituted a word's synonym in the other language.

This example gives us some insight into the role that visual input plays in reading. (Indeed, the title of Kollers' article is "Reading Is Only Incidentally Visual.") These bilingual readers certainly took in the visual information on the page, but their *attention* was more on the content. We understand and remember meaning, while the visual details remain generally outside our conscious awareness, unless we highlight them by getting stuck, or by focusing on the process itself.

Studies of eye movement have also been used to understand the role of the visual in reading. Reading isn't smooth and continuous but involves leaps, fixations, and regressions. Although eye movement studies have been used to attack the idea that readers don't take in full visual information (e.g., Adams, 1990), theorists like Frank Smith have never claimed that we look at only some of the words on a page or some of the letters in a word.

It's obvious from eye movement studies that readers fixate on most words, particularly content words; Smith (1988, 257) specifically mentions this. However, it still remains to be explained why, if we're fixing on virtually every word, we can still read a sentence more quickly than we can identify individual words or letters. Smith posits that what we're attending to are significant features; although it's impossible to determine exactly what they consist of, the redundancy and predictability of English enable us to perceive an *h* more quickly in a text like "I ate a honeydew" than in a list of random letters. (Actually, we're not even "reading" the *h* in *honeydew* so much as reading the word, which we can then realize starts with an *h*.)

## Miscues as a window on the reading process

Do we agree, then, that all readers will make miscues unless they're going so slowly that they lose efficiency? What's of most interest is the types of miscues that they make, since good readers tend to make miscues that preserve meaning, to self-correct when meaning is damaged, and to have a range of strategies to apply when they get stuck.

How do we learn about what people do when they read? Although silent reading is the more basic process (since oral reading is just a performance add-on to it), we can never know exactly what's going on in silent reading. Indeed, it's even hard to look introspectively at our own reading since attending to it interrupts it. But oral reading is, in Ken

Goodman's (1973) memorable phrase, a window on the reading process, which we can then examine through miscue analysis.

An experience I had with a secretary several years ago struck me as analogous to what we can understand about readers through miscue analysis. I'd asked this secretary to type a letter from my handwritten draft, and I'm the first to admit that my handwriting is execrable. (In fact, it gets worse every year as I get more and more impatient with its relative slowness compared to typing.) Many of my words were indeed not readable; sometimes I can't even read my own writing! A very strong secretary would have tried to read for meaning, and resolved the ambiguities in the context of the entire text, although she might have risked changing the meaning in part. An adequate secretary would have tried to figure out, "Okay, what word could this be?" What this woman did, however, was to direct her attention to each ambiguous *letter* and make her best guess as to what it was, producing a final result that made no sense at all. This extreme tunnel vision is similar to that of the reader who has only sounding out as a strategy.

So, now that we've established some underlying knowledge, theory, and principles, let's move on to learning how to conduct a miscue analysis, where we'll see how the cueing systems of reading work smoothly together, and what happens when the process runs into snags. And I hope you'll keep in mind the underlying idea that the most useful way to look at miscues is not as a failure on the reader's part but as a rich source of information about what she knows and does.